WHAT IS CLAIMED IS:

1.   A method of traversing pixels of a graphic object with a fragment stamp, the fragment stamp having a plurality of probe points, the graphic object being defined with respect to an array of pixels that is divided into an array of contiguous but non-overlapping stamp positions at which the fragment stamp can be placed, the method comprising, at a current one of the stamp positions, evaluating whether a plurality of stamp positions that are adjacent to the current stamp position are valid positions, wherein the evaluating step further comprises determining, at the current stamp position, whether a segment formed by two of the probe points intersects the graphic object and wherein at least one of the two probe points are exterior to the current stamp position.

2.   The method of claim 1 wherein the evaluating step includes:
       generating sliver information indicative of whether a plurality of the stamp positions adjacent to the current stamp position are sliver positions.

3.   The method of claim 2 further comprising:
       based at least in part on the sliver information, moving the fragment stamp to a next one of the stamp positions.

4.   The method of claim 1 wherein the evaluating step comprises:
       determining whether a forward stamp position adjacent to the current stamp position is a sliver position;
       determining whether a back stamp position adjacent to the current stamp position is a sliver position; and
       determining whether an over stamp position adjacent to the current stamp position is a valid position.

5.   The method of claim 4, wherein the evaluating step further comprises determining whether the over stamp position is a sliver position.

6.   The method of claim 1 further comprising, based at least in part on the results of the evaluating step and based at least in part on previously saved context information, moving the fragment stamp from the current stamp position to a next one of the stamp positions.

7.	The method of claim 6 wherein the moving step further comprises, based at least in part on the results of the evaluating step, restoring from a stamp context a previously saved stamp position so as to position the stamp in another stamp position.

8.	The method of claim 6 wherein the moving step comprises:

moving the fragment stamp to one of an unvisited non-sliver valid forward stamp position and an unvisited non-sliver valid back stamp position, if any such stamp position exists;

otherwise moving the fragment stamp to an unvisited valid over stamp position, if any such stamp position exists; and

otherwise moving the fragment stamp to one of an unvisited sliver forward stamp position and an unvisited sliver back stamp position, if any such stamp position exists.

9.	The method of claim 8, wherein any one of the unvisited non-sliver valid forward stamp position, the unvisited non-sliver valid back stamp position, the unvisited valid over stamp position, the unvisited sliver forward stamp position and the unvisited sliver back stamp positions is either a stamp position adjacent to the current stamp position or a stamp position previously stored in one of a plurality of stamp contexts.

10.	The method of claim 8, wherein any one of the unvisited non-sliver valid back stamp position, the unvisited valid over stamp position and the unvisited sliver back stamp positions is either a stamp position adjacent to the current stamp position or a stamp position previously stored in one of a plurality of stamp contexts, and

wherein any one of the unvisited non-sliver valid forward stamp position and the unvisited sliver forward stamp position is a stamp position adjacent to the current stamp position.

11.	The method of claim 6 wherein the moving step comprises:

moving the fragment stamp to an unvisited valid over stamp position, if any such stamp position exists;

otherwise moving the fragment stamp to an unvisited valid forward stamp position, if any such stamp position exists; and

otherwise moving the fragment stamp to a sliver forward stamp position, if any such stamp position exists.

12.   The method of claim 11, wherein any one of the unvisited non-sliver valid forward stamp position, the unvisited valid over stamp position, and the unvisited sliver forward stamp position is either a stamp position adjacent to the current stamp position or a stamp position previously stored in one of a plurality of stamp contexts.

13.   The method of claim 11, wherein any one of the unvisited non-sliver valid forward stamp position, and the unvisited sliver forward stamp position is either a stamp position adjacent to the current stamp position or a stamp position previously stored in one of a plurality of stamp contexts; and

        wherein the unvisited valid over stamp position is a stamp position adjacent to the current stamp position.

14.   The method of claim 6 wherein the moving step comprises:

        moving the fragment stamp to an unvisited valid over stamp position, if any such stamp position exists;

        otherwise moving the fragment stamp to an unvisited non-sliver valid back stamp position, if any such stamp position exists; and

        otherwise moving the fragment stamp to an unvisited sliver back stamp position, if any such position exists.

15.   The method of claim 14 wherein any one of the unvisited non-sliver valid back stamp position, the unvisited valid over stamp position, and the unvisited sliver back stamp positions is either a stamp position adjacent to the current stamp position or a stamp position previously stored in one of a plurality of stamp contexts.

16.   The method of claim 14 wherein any one of the unvisited non-sliver valid back stamp position, and the unvisited sliver back stamp positions is either a stamp position adjacent to the current stamp position or a stamp position previously stored in one of a plurality of stamp contexts, and

        wherein the unvisited valid over stamp position is a stamp position adjacent to the current stamp position.

17.   The method of claim 6 wherein the moving step comprises:

        moving the fragment stamp to an unvisited valid non-sliver over stamp position, if any such stamp position exists;

otherwise moving the fragment stamp to an unvisited non-sliver valid forward stamp position, if any such stamp position exists and if a first predetermined condition is satisfied;

otherwise moving the fragment stamp to an unvisited non-sliver valid back stamp position, if any such stamp position exists and if a second predetermined condition is satisfied;

otherwise moving the fragment stamp to an unvisited sliver over stamp position, if any such stamp position exists;

otherwise moving the fragment stamp to an unvisited sliver forward stamp position, if any such stamp position exists and if a third predetermined condition is satisfied; and

otherwise moving the fragment stamp to an unvisited sliver back stamp position, if any such stamp position exists and if a fourth predetermined condition is satisfied.

18.   The method of claim 17 wherein any one of the unvisited non-sliver valid forward stamp position, the unvisited non-sliver valid back stamp position, the unvisited non-sliver valid over stamp position, the unvisited sliver forward stamp position, the unvisited sliver back stamp position, and the unvisited sliver over stamp positions is either a stamp position adjacent to the current stamp position or a stamp position previously stored in one of a plurality of stamp contexts.

19.   The method of claim 17 wherein any one of the unvisited non-sliver valid forward stamp position, the unvisited non-sliver valid back stamp position, the unvisited sliver forward stamp position, and the unvisited sliver back stamp position is either a stamp position adjacent to the current stamp position or a stamp position previously stored in one of a plurality of stamp contexts; and

any one of the unvisited non-sliver valid over stamp position and the unvisited sliver over stamp position is a stamp position adjacent to the current stamp position.

20.   The method of claim 1 further comprising, based at least in part on the results of the evaluating step, saving information associated with a stamp position that is adjacent to a current stamp position into a corresponding stamp context of a plurality of stamp contexts; the saved information including said stamp position.

21.   The method of claim 20 wherein the saved information further comprises sliver information.

22.   The method of claim 1 wherein the evaluating step includes:

determining whether an over stamp position adjacent to the current stamp position is a valid position; and

determining whether the over stamp position is a productive position by determining whether one or more sample points of the stamp will be contained within the graphics object when the stamp is placed in the over stamp position.

23.   The method of claim 22 further comprising saving the over stamp position in an oversave stamp context when the over stamp position is valid and known to be productive, and when said oversave stamp context does not already contain a stamp position that is known to be productive.

24.   The method of claim 4, where the evaluating step further comprises:

making a sliver back stamp position invalid if the over stamp position is valid.

25.   The method of claim 24, wherein the back stamp position and the over stamp position are adjacent to the current stamp position or a stamp position previously stored in one of a plurality of stamp contexts.

26.   The method of claim 4, where the evaluating step further comprises:

making a sliver forward stamp position invalid if the over stamp position is valid.

27.   The method of claim 26, where forward stamp position and the over stamp position are adjacent to the current stamp position or a stamp position previously stored in one of a plurality of stamp contexts.

28.   The method of claim 1 wherein the stamp comprises a rectangle having a top edge, a bottom edge, a left edge and a right edge, and wherein the probes external to the stamp are placed such that:

all probes above the top edge are no farther above said top edge than the lowest sample point in the stamp is from the bottom edge;

all probes below the bottom edge are no farther below said bottom edge than the highest sample point in the stamp is from the top edge;

all probes to the left of the left edge are no farther to the left of said left edge than the rightmost sample point in the stamp is from the right edge;

all probes to the right of the right edge are no farther to the right of said right edge than the leftmost sample point in the stamp is from the left edge.

29.   The method of claim 1 wherein the stamp is a rectangle having a top edge, a bottom edge, a left edge and a right edge, and wherein the probes points external to the stamp are placed such that a segment between the probes points that is evaluated for intersection with the graphics object in order to compute valid or sliver bits satisfies the following constraints:

the stamp position immediately above has no sample point below said segment;

the stamp position immediately below has no sample point above said segment;

the stamp position immediately to the left has no sample point to the right of said segment;

the stamp position immediately to the right has no sample point to the left of said segment.

30.   The method of claim 1, further comprising

when a first plurality of predetermined conditions are satisfied, placing the stamp at a starting stamp position that includes a top-most vertex of the graphics object; and

when a second plurality of predetermined conditions are satisfied, placing the stamp at a starting stamp position that includes a bottom-most vertex of the graphics object.

31.   The method of claim 30, further comprising:

if a distance from a top-most sample point to a top edge of the stamp is larger than a distance from the bottom-most sample point to a bottom edge of the stamp rectangle, placing the stamp at the starting stamp position that includes the top-most vertex of the graphics object; and

otherwise, placing the stamp at the starting stamp position that includes the bottom-most vertex of the graphics object.

32.   The method of claim 1 wherein

when a first plurality of predetermined conditions are satisfied, placing the stamp at a starting stamp position that includes a left-most vertex of the graphics object; and

when a second plurality of predetermined conditions are satisfied, placing the stamp at a starting stamp position that includes a right-most vertex of the graphics object.

33.   The method of claim 32 wherein

if the distance from a left-most sample point to a left edge of the stamp is larger than the distance from a right-most sample point to a right edge of the stamp rectangle, placing the stamp at the starting stamp position that includes the left-most vertex of the graphics object,

otherwise placing the stamp at the starting stamp position that includes the right-most vertex of the graphics object.

34.   A graphics processor configured to traverse pixels of a graphic object with a fragment stamp that has a rectangle, an origin point located at a corner of the stamp rectangle, and plurality of probe points, the graphic object being defined with respect to an array of pixels that is divided into an array of stamp positions, the plurality of probe points comprising:

an upper left probe offset from the origin point in an x direction by –SU pixels, wherein SU is a predetermined value, and offset from the origin point in a y direction by –SU pixels, the y direction being perpendicular to the x direction;

an upper right probe offset from the origin point in the x direction by a width of the stamp, and in the y direction by –SU pixels;

a left bottom probe, offset from the origin point in the x direction by –SU pixels, and in the y direction by a height of the stamp;

a right bottom probe, offset from the origin point in the x direction by the width of the stamp, and in the y direction by the height of the stamp.

35.   A graphics processor configured to traverse pixels of a graphic object with a fragment stamp that has a rectangle, an origin point located at a corner of the stamp rectangle, and plurality of probe points, the graphic object being defined with respect to an array of pixels that is divided into an array of stamp positions, the plurality of probe points comprising:

a left top probe, offset from the origin point in an x direction by –SU pixels, wherein SU is a predetermined value;

an upper left probe offset from the origin point in a y direction by –SU pixels, the y direction being perpendicular to the x direction;

an upper right probe offset from the origin point in the x direction by a width of the stamp minus SU pixels, and in the y direction by –SU pixels;

a right top probe, offset from the origin point in the x direction by the width of the stamp;

a left bottom probe, offset from the origin point in the x direction by –SU pixels, and in the y direction by a height of the stamp;

a lower left probe, offset from the origin point in the y direction by the height of the stamp;

a lower right probe, offset from the origin point in the x direction by the width of the stamp minus SU pixels, and in the y direction by the height of the stamp;

a right bottom probe, offset from the origin point in the x direction by the width of the stamp, and in the y direction by the height of the stamp.

36.	The graphics processor of claim 35 wherein the left top probe is tested for intersection with the graphics object to determine, in part, if the stamp position immediately to the left of the current stamp position is productive.

37.	The graphics processor of claim 35 wherein the right top probe is tested for intersection with the graphics object to determine, in part, if the stamp position immediately to the right of the current stamp position is productive.

38.	The graphics processor of claim 35 wherein:

the plurality of probe points includes a left middle probe, offset from the origin point in the x direction by –SU pixels, and in the y direction by the height of the stamp minus SU pixels;

the segment between the left middle probe and the left top probe is tested for intersection with the graphics object to determine, in part, if the stamp position immediately to the left of the current stamp position is a sliver.

39.	The graphics processor of claim 35 wherein:

the plurality of probe points include a right middle probe, offset from the origin point in the x direction by the width of the stamp, and in the y direction by the height of the stamp minus SU pixels;

the segment between the right middle probe and the right top probe is tested for intersection with the graphics object to determine, in part, if the stamp position immediately to the right of the current stamp position is a sliver.

40.   A graphics processor for rendering an image including a graphic object, the graphic object being defined with respect to an array of pixels that is divided into an array of stamp positions, the graphics processor comprising:

a frame buffer memory configured to store information associated with the graphic object;

graphics circuitry configured to render the graphic object with a fragment stamp one stamp position at a time, the fragment stamp having a plurality of probe points;

stamp control logic configured to set a current stamp position of the fragment stamp, wherein said stamp control logic generates validity information indicative of whether a plurality of stamp positions that are adjacent to the current stamp position are valid positions, wherein the stamp control logic generates the validity information based at least in part on determining, at the current stamp position, whether a segment formed by two of the probe points intersects the graphic object, at least one of the two probe points being exterior to the current stamp position.

41.   The graphics processor of claim 40 wherein the stamp control logic is configured to generate sliver information indicative of whether the plurality of the stamp positions adjacent to the current stamp position are sliver positions.

42.   The graphics processor of claim 40, wherein the stamp control logic is configured to:

determine whether a forward stamp position adjacent to a current stamp position is a sliver position;

determine whether a back stamp position adjacent to the current stamp position is a sliver position; and

determine whether an over stamp position adjacent to the current stamp position is a valid position.

43.   The graphics processor of claim 41 wherein the stamp control logic moves the fragment stamp from the current stamp position to a next one of the stamp positions based at least in part on the sliver information and based at least in part on previously saved context information.

44.   The graphics processor of claim 40 wherein the stamp control logic restores from a stamp context a previously saved stamp position so as to position the stamp in another

stamp position, wherein the stamp control logic restores the previously saved stamp position based at least in part on the validity information and based at least in part on previously saved context information.

45.   The graphics processor of claim 40 wherein the stamp control logic saves the over stamp position in an oversave stamp context when the over stamp position is valid and known to be productive, and when said oversave stamp context does not already contain a stamp position that is known to be productive.